

cont'd  
A1  
optical resonator according to curvature of wavefront of an incident laser beam,  
which comprises locking means for locking the bending mechanism in an  
adjusted position. --

[Please add the following new claim:]

C1  
A2  
-- 2. An apparatus for locking a bending mechanisms that bends a  
reflex type wavelength selection element constituting a part of an optical  
resonator according to curvature of wavefront of an incident laser beam, which  
comprises adjustment means for varying a position of a grating that modifies  
the curvature of wavefront of an incident laser beam to an adjusted position,  
and locking means for locking the adjustment means in the adjusted position. --

#### REMARKS

In the foregoing amendments, the claim 1 was amended. Claim 1 was  
amended to better define the invention. Attached hereto is a marked-up  
version of the changes made to claim 1 by the current amendment. The  
attached pages are captioned "VERSION WITH MARKINGS TO SHOW  
CHANGES MADE."

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by  
U.S. Patent No. 5,283,797 of Mefferd. The Official Action noted that Mefferd  
teaches a locking mechanism for locking a mechanism for bending a mirror in

a laser resonator. In particular, the Official Action noted column 8, lines 37-63, and Figs. 8-13 of Mefferd as disclosing the mechanism for locking the mirrors.

Applicant respectfully submits that the teachings of Mefferd do not disclose us just invention as set forth in the present claims within the meaning of 35 U.S.C. § 102(b) or 35 U.S.C. § 103.

The teachings of Mefferd appear to suggest a mechanism for adjusting positions of the mirrors from outside the housing, utilizing tilt member 94, pins 98 and corresponding screw members 102. However, there is absolutely no discussion in Mefferd concerning a locking mechanism, as required in present claim 1.

In contrast to the teachings of Mefferd, applicant's specification describes that in the presently claimed invention the bending mechanism is provided with an adjustment bolt together with a locking means. The structure proposed in Mefferd for adjusting positions of the mirrors has nothing to do with a locking mechanism for locking the mirrors in an adjusted position as presently claimed. Therefore, applicant respectfully submits that the teachings of Mefferd cannot contemplate or suggest the invention as set forth in claim 1.

New claim 2 defines both an adjustment means and a locking means, where the adjustment means varies the curvature of a reflecting surface of a grating in correspondence with the curvature of wavefront of an incident laser beam to an adjusted position, and the locking means locks the adjustment

means in the adjusted position. This combination is not remotely contemplate or suggested by the teachings of Mefferd.

Please refer to Fig. 1 of the present application. In the presently claimed invention, the bending mechanism, which includes items 2, 3, 4, and 5 as shown in Fig. 1 of the present application, bends the grating 1 in correspondence with the curvature of an incident wavefront of a laser beam. The presently claimed locking means 8 fixes the grating 1 at the adjusted position to maintain the shape of the grating 1 thus bent by the bending mechanism. As shown in Fig. 1, for example, within the bending mechanism, the grating is bent as a pushing member 2 slides to thereby vary a curvature of the reflecting surface of the grating. Rotation of the adjustment bolt 5 causes the pushing member to slide into the desired position (adjustment position), where the shape of the grating 1 is substantially coincident with the shape of an incident wavefront of the laser beam. In order to prevent the pushing member that is in the adjustment position from becoming displaced, a locking means (i.e., screw 8) is provided to fix the pushing member 2 at its lower (or upper) surface. When the locking screw 8 is used, the pushing member 2 will not move and the shape of the grating 1 will be maintained even when vibrations or shocks are applied to the laser apparatus.

In contrast to the presently claimed invention, the teachings of Mefferd do not disclose or suggest the bending mechanism of the type set forth in the present claims. More importantly, the teachings of Mefferd do not disclose or

suggest any type of locking mechanism, such as the separate locking mechanism as presently claimed. As discussed above, the bending mechanism of the presently claimed invention makes it possible to perform the adjustment operation by the simple rotation of the adjustment bolt. Thereafter, the locking means of the presently claimed invention ensures wavelength selection stability even when the device is subjected to vibration or shocks, such as after shipment from the manufacturing plant, because it prevents the bending mechanism from moving from the adjusted position.

Applicant respectfully submits that the above-discussed structures and resulting advantageous effects of the presently claimed invention are not contemplated or suggested by the teachings of Mefferd. Therefore, applicant respectfully requests that the Examiner reconsider and withdraw this rejection.

In view of the foregoing amendment and remarks, favorable consideration and allowance of claims 1 and 2 are respectfully requested. While it is believed that the present application is in condition for allowance, should the Examiner have any comments or questions, it is respectfully requested that the undersigned be telephoned at the below-listed number to resolve any outstanding issues.

In the event any additional fees are due, please charge our Deposit  
Account No. 22-0256.

Respectfully submitted,  
VARNDELL & VARNDELL, PLLC  
(formerly Varndell Legal Group)

A handwritten signature in dark ink, appearing to read "R. Eugene Varndell, Jr.", is written over a horizontal line.

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Claim 1 was amended as follows:

-- 1. (Amended) An apparatus for locking a bending mechanisms that bends a reflex type wavelength selection element constituting a part of [a] an optical resonator according to curvature of wavefront of an incident laser beam, [characterized in that:] which comprises locking means for locking the bending mechanism in an adjusted position [is provided]. --